

DETAILED ACTION

Allowable Subject Matter

1. Claims 1, 3, 5-9, 11 and 13-16 are allowed.
2. The following is an examiner's statement of reasons for allowance: The cited prior art of record considered as a whole (either alone or in combination) fails to teach or suggest – the equalization unit has first frequency-gain characteristics that obtain a maximum gain of not less than 15dB at a frequency corresponding to a shortest pit or mark, and second frequency-gain characteristics in which a gain attenuates within a frequency band not less than frequency corresponding to the shortest pit or mark, and the equalization unit has third frequency-gain characteristics that obtain a gain of not more than -3dB at a frequency three times the frequency corresponding to the shortest pit or mark.

Regarding Claim 1 and claim 9, Ma teaches a disk apparatus and an information processing method for reproducing a disk on which information is recorded by pits or marks with various lengths (regardless of the lengths of pits or marks; see column 6, line 1) but Ma fails to teach the minimum pit pitch being $0.102\mu\text{m}$ and a run length limitation = (1, 10). Ma also teaches a disk apparatus comprising: a photodetection unit configured to divisionally detect light reflected by the disk as a plurality of photodetection signals (four photodetector elements A, B, C, and D; see figure 3); and a tracking error signal generation unit configured to generate a tracking error signal on the basis of a phase difference between the plurality of photo-detection signals detected by

Art Unit: 2627

the photodetection unit (see figure 3 and also the Abstract), wherein the tracking error signal generation unit includes: an equalization unit configured to equalize waveforms of the plurality of photodetection signals detected by the photodetection unit (equalizers 306a and 306b; see figure 3). Ma fails to teach the equalization unit has first frequency-gain characteristics that obtain a maximum gain of not less than 15dB at a frequency corresponding to a shortest pit or mark, and second frequency-gain characteristics in which a gain attenuates within a frequency band not less than frequency corresponding to the shortest pit or mark, and the equalization unit has third frequency-gain characteristics that obtain a gain of not more than -3dB at a frequency three times the frequency corresponding to the shortest pit or mark.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENOK G. HEYI whose telephone number is (571)270-1816. The examiner can normally be reached on Monday to Friday 8:30 to 6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph H. Feild/
Supervisory Patent Examiner, Art
Unit 2627

/Henok G Heyi/
Examiner, Art Unit 2627